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XV. *An Account of the Relistian Tin Mine. By Mr. Joseph Carne, in a Letter to Davies Giddy, Esq. M.P. F.R.S.*

Read May 7, 1807.

DEAR SIR,

Penzance, April 22, 1807.

WHEN I mentioned the occurrence of pebbles of chlorite shist, cemented by crystalized tin, in the Relistian mine, you expressed a wish to receive a particular account of this novel circumstance.

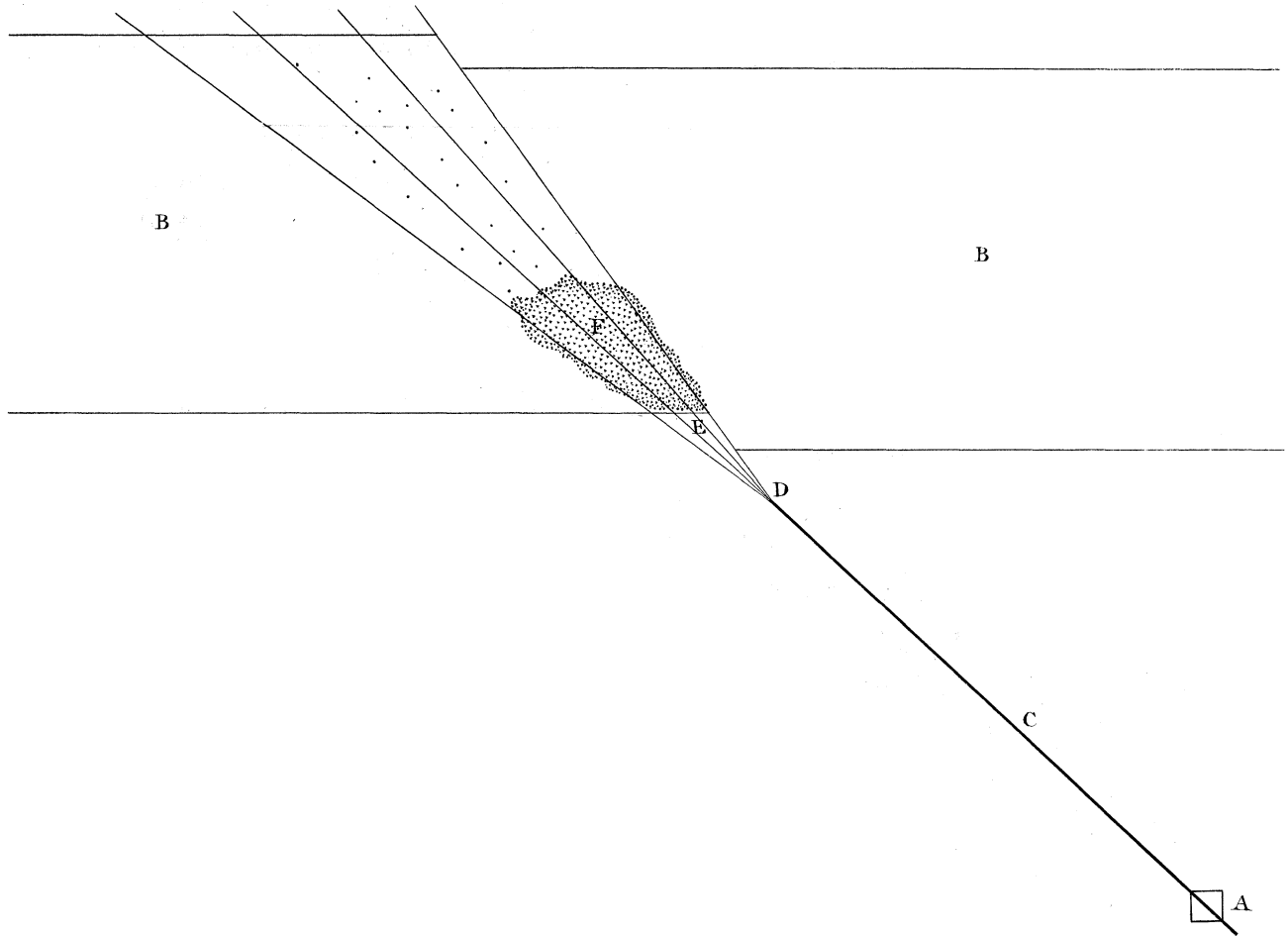
The Relistian mine is nearly on a level with the surrounding country. The lode has been seen at the depth of 12, 25, 50, 65, 75, 81, and 90 fathoms from the surface. It is of different width in different parts; the extreme width is 36 feet, and in this part it is principally worked. As it extends east and west (which is its due course), its width gradually diminishes, till at the distance of 100 fathoms east it is but 5 feet wide. It is composed (excepting the metallic substances) of shist, chlorite, and quartz. In some parts the shist predominates, and in others the chlorite; the quartz is throughout the smallest component part. The engine shaft (see plan (A)) is situated 8 fathoms north of the widest part of the lode (B). In sinking the shaft a flookan (C), about 2 inches wide, was discovered, bearing a south-east course, which cut the lode at an angle of 45°; and heaved and disordered it.

At the depth of 12, 25, and 50 fathoms, nothing was discovered in the lode but the cavities from which the ore had been taken away during the former period of working the mine.

At 65 fathoms in depth were found, close to the flookan, a great number of angular fragments of shist, cemented by the same substance.

At the depth of 75 fathoms the flookan (C) became 4 inches wide in the shaft (A), and continued of that size for 10 fathoms; it then became divided into 4 parts or branches (D), each diverging from its former course, and in this state it continued through the lode (B), of which the first 3 feet were composed of copper pyrites (E), and then was discovered a body of pebbles (F), nearly 12 feet square, extending in width to the extreme branches of the flookan. In this part of the lode the shist greatly predominates; of course the pebbles are generally composed of shist, cemented in some parts by the same substance or chlorite, in others by oxyde of tin, which is generally crystallized, and in some of the crevices there is a little copper pyrites. It is singular that a few pebbles (perhaps not more than half a score) were found of quite a different nature from the others; they were composed of tin in quartz coated with chlorite.

The pebbles did not continue in a body to the height of more than 2 fathoms; but scattered bunches, and single pebbles, were found 4 fathoms above and 6 fathoms below the place in which they were at first discovered. It is only necessary to add, that the lode has since been worked 15 fathoms deeper than where the pebbles occurred; it there consists for



the most part of chlorite formed in a regular manner ; not the least trace of pebbles is to be seen, nor indeed of any disturbance in the strata.

I am, dear Sir,

very sincerely yours,

JOSEPH CARNE.

Penzance, Cornwall.